

REMARKS:

Claims 1, 4, 8-14, 23, 25, 27, 30-36 and 38 are presented for examination, with claims 1, 8-12, 14, 25, 27, 30-34 and 36 having been amended hereby and claims 2, 3, 5-7, 15-22, 24, 26, 28, 29 and 37 having been cancelled, without prejudice or disclaimer.

Reconsideration is respectfully requested of the rejection of claims 1, 4, 8-13, 23, 25, 27, 30-35 and 38 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,656,178 (“Veldhuizen et al.”).

It is respectfully submitted that applicants do not necessarily concur with the Examiner in the Examiner’s analysis of the claims of the present application and the Veldhuizen et al. disclosure.

For example, independent claims 1 and 25 had recited, even before amendment hereby, that the “sleeve is configured as an endless loop”.

In contrast, Veldhuizen et al. specifically require use of a straight strip (with two distinct extremities situated apart from one another) which can be inserted through a narrow slit and which can then assume a second shape within the body.

In this regard, see the discussion in Veldhuizen et al. at col. 6, lines 17-28, which indicates that:

According to the invention the device exhibits the characteristic that the strip is manufactured from a material that can undergo great deformations before permanent deformation arises, and the strip is curved in a shape in which the extremities are situated apart from one another and the radius of the curved parts as well as the thickness of the strip are chosen in such a way that when the strip is bent out into an at least approximately straight strip scarcely any permanent deformation arises, in which case the strip which has been bent out into an approximately straight strip is capable of being introduced into an intervertebral space where the strip assumes its original curved shape. (emphasis added)

Further, see the discussion in Veldhuizen et al. at col. 12, lines 29-38, which indicates that:

This means that, after being deformed into an almost straight strip, such devices can be introduced, via a narrow slit made in the spine bounding the intervertebral space, into said intervertebral space where they then resume their original shape. In that position the end faces 2 and 3 then come into contact with the adjacent vertebrae, in which case the strip then performs a supporting and stabilising function for these vertebrae and thus takes over the

load-bearing function of the intervertebral disc until bone fusion has come about. (emphasis added)

Thus, even when in the body in it's second shape, while the device of Veldhuizen et al. may curve in an arc (and even approach a circular configuration) the device is simply not configured as an endless loop (i.e., a continuous loop).

Nevertheless, in order to expedite prosecution of the application, claims 1 and 25 have been amended hereby to more particularly point out the features of the invention directed to: (a) the internal sleeve and the outer sleeve being fixed to one another such that relative motion between the internal sleeve and the outer sleeve is substantially eliminated; and (b) the internal sleeve and the outer sleeve being fixed via at least one connection point where a corrugation of the internal sleeve meets the outer sleeve.

It is believed that these features, as claimed, are neither shown nor suggested by Veldhuizen et al.

In this regard, applicants respectfully note the comments made by the Examiner regarding the inner and outer sleeves claim language which had been recited in now-cancelled claims 16 and 37. That is, applicants note the comments made by the Examiner at page 4 of the September 21, 2004 Office Action referring to Figs. 10 and 11c as well as col. 7, lines 45-48 of Veldhuizen et al.

It is believed that neither Figs. 10 and 11c nor col. 7, lines 45-48 show or suggest either: (a) the internal sleeve and the outer sleeve being fixed to one another such that relative motion between the internal sleeve and the outer sleeve is substantially eliminated; or (b) the internal sleeve and the outer sleeve being fixed via at least one connection point where a corrugation of the internal sleeve meets the outer sleeve.

In fact, it is respectfully submitted that since Veldhuizen et al. specifically require use of a straight strip (with two distinct extremities situated apart from one another) which can be inserted through a narrow slit and which can then assume a second shape within the body, any adjacent strips must not be fixed such that relative motion between them is substantially eliminated. That is, in the Veldhuizen et al. device there must be relative motion between adjacent strips in order to allow the device to deform from its straight configuration to its curved configuration.

Finally, it is noted that each of claims 4, 8-13, 23, 27, 30-35 and 38 depends (either directly or indirectly) from a respective one of independent claims 1 and 25 and thus, each of claims 4, 8-13,

23, 27, 30-35 and 38 is submitted to be patentably distinct for at least the same reasons as the claim from which it depends.

Therefore, it is respectfully submitted that the rejection of claims 1, 4, 8-13, 23, 25, 27 30-35 and 38 under 35 U.S.C. 102(e) as being anticipated by Veldhuizen et al. has been overcome.

Reconsideration is respectfully requested of the rejection of claims 1, 4, 8-12, 25, 27, and 30-34 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,609,637 (“Biedermann et al.”) in view of Veldhuizen et al.

It is respectfully submitted that applicants do not necessarily concur with the Examiner in the Examiner’s analysis of the claims of the present application and the Biedermann et al. and Veldhuizen et al. disclosures.

Nevertheless, as discussed above with reference to the 35 U.S.C. 102(e) rejection in view of Veldhuizen et al., claims 1 and 25 have been amended hereby to more particularly point out the features of the invention directed to: (a) the internal sleeve and the outer sleeve being fixed to one another such that relative motion between the internal sleeve and the outer sleeve is substantially eliminated; and (b) the internal sleeve and the outer sleeve being fixed via at least one connection point where a corrugation of the internal sleeve meets the outer sleeve.

It is respectfully submitted that Biedermann et al. (like Veldhuizen et al. discussed above) does nothing to show or suggest these features of the claimed invention.

In this regard, it is respectfully noted that the current rejection under 35 U.S.C. 103(a) with regard to Biedermann et al. and Veldhuizen et al. is not made against now-cancelled claims 16 and 37, which had recited inner and outer sleeves.

Thus, it is respectfully submitted that the Examiner herself has actually implicitly acknowledged the lack of disclosure of Biedermann et al. of this inner and outer sleeves feature.

Finally, it is noted that each of claims 4, 8-12, 27 and 30-34 depends (either directly or indirectly) from a respective one of independent claims 1 and 25 and thus, each of claims 4, 8-12, 27 and 30-34 is submitted to be patentably distinct for at least the same reasons as the claim from which it depends.

Therefore, it is respectfully submitted that the rejection of claims 1, 4, 8-12, 25, 27 and 30-34 under 35 U.S.C. 103(a) as being unpatentable over Biedermann et al. in view of Veldhuizen et al. has been overcome.

Reconsideration is respectfully requested of the rejection of claims 1, 4, 8-11, 14, 25, 27, 30-

33 and 36 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,176,881 ("Schar et al.").

It is respectfully submitted that applicants do not necessarily concur with the Examiner in the Examiner's analysis of the claims of the present application and the Schar et al. disclosure.

For example, reference is made to the feature of the present invention directed to the implant being provided with a first end and a second end, wherein the first end and the second end are open, wherein the first open end is adapted to contact the first one of the vertebrae, and wherein the second open end is adapted to contact the second one of the vertebrae (of note, this feature was already recited in independent claims 1 and 25 before the filing of this Amendment).

In marked contrast, the device of Schar et al. does not utilize such open first and second ends for contacting the vertebrae. More particularly, the telescopic vertebral prosthesis of Schar et al. utilizes an interior hollow body 1 and an exterior hollow cylinder 2, each of which is equipped with end plates 38, 39 (*see* Fig. 3 and col. 3, lines 25-29).

Nevertheless, as discussed above, claims 1 and 25 have been amended hereby to more particularly point out the features of the invention directed to: (a) the internal sleeve and the outer sleeve being fixed to one another such that relative motion between the internal sleeve and the outer sleeve is substantially eliminated; and (b) the internal sleeve and the outer sleeve being fixed via at least one connection point where a corrugation of the internal sleeve meets the outer sleeve.

It is believed that these features, as claimed, are neither shown nor suggested by Schar et al.

For example, see Fig. 3 and col. 3, lines 9-13 of Schar et al., where it is indicated that "[t]he interior hollow body 1, which is provided with a catch mechanism 5 on its outer surface, 4 is arranged so that it can slide in the exterior hollow body 2 and can be displaced relative to it along the central axis 3." (emphasis added)

See also, Fig. 6 of Schar et al. where it is seen that longitudinal slits 27 provide for relative longitudinal movement between the parts.

Thus, Schar et al. clearly does not show or suggest the internal sleeve and the outer sleeve being fixed to one another such that relative motion between the internal sleeve and the outer sleeve is substantially eliminated.

In addition, regarding claims 14 and 36 in particular, applicants respectfully note the comments made by the Examiner concerning the openings and the cerclage passing through the openings. That is, applicants note the comments made by the Examiner at page 7 of the September

21, 2004 Office Action referring to Fig. 6 of Schar et al.

It is believed that Fig. 6 of Schar et al. does not show or suggest this cerclage feature. This is because the term “cerclage” is defined at page 8, lines 5-9 of the present application as “a piece of material which encircles a sleeve, and holds the sleeve together and/or fixes the sleeve in place around a bone”.

In marked contrast, it is respectfully submitted that what is shown in Fig. 6 of Schar et al. is “[a]n elastic strap 24 with free ends 25,26 that are bent outward and can be latched into longitudinal slits 27 on the exterior hollow body 2 [to secure] the two hollow bodies 1,2 to prevent rotation.” (col. 3, lines 44-47) The elastic strap 24 simply does not fit the definition provided by the specification of the present application.

Nevertheless, in order to expedite prosecution of the application, claims 14 and 36 have been amended hereby to more particularly point out the feature of the invention directed to the cerclage passing through the openings in the implant and being secured around a bone to secure at least one of the internal sleeve and the outer sleeve to the bone.

It is respectfully submitted that any disclosure in Schar et al. relating to the elastic strap 24 with free ends 25,26 that are bent outward and can be latched into longitudinal slits 27 on the exterior hollow body 2 to secure the two hollow bodies 1,2 to prevent rotation does nothing to show or suggest the bone-securing feature now claimed.

Finally, it is noted that each of claims 4, 8-11, 14, 27, 30-33 and 36 depends (either directly or indirectly) from a respective one of independent claims 1 and 25 and thus, each of claims 4, 8-11, 14, 27, 30-33 and 36 is submitted to be patentably distinct for at least the same reasons as the claim from which it depends.

Therefore, it is respectfully submitted that the rejection of claims 1, 4, 8-11, 14, 25, 27, 30-33 and 36 under 35 U.S.C. 103(a) as being unpatentable over Schar et al. has been overcome.

Additionally, it is noted that this Amendment is fully supported by the originally filed application and thus, no new matter has been added. For this reason, the Amendment should be entered.

More particularly, support for the amendments regarding the implant having inner and outer sleeves is found at page 8, lines 10-13; in Figs. 5a, 5b and 5c; and throughout the specification.

Further, support for the amendments regarding the cerclage being secured around a bone is found at page 8, lines 5-9; in Figs. 9 and 10; and throughout the specification.

Accordingly, it is respectfully submitted that each rejection raised by the Examiner in the September 21, 2004 Office Action has been overcome and that the above-identified application is now in condition for allowance.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,
GREENBERG TRAURIG

By:


Matthew B. Tropper
Registration No. 37,457

Dated: December 16, 2004

Mailing Address:
GREENBERG TRAURIG
885 Third Avenue
New York, New York 10022
(212) 801-2100
Facsimile: (212) 688-2449